

## ABSTRACT OF THE DISCLOSURE

A lower electrode is formed over a substrate, and a raw material including a complex oxide is heated in an atmosphere pressurized to two atmospheres or more and containing oxygen at a volume ratio of 10% or less at a temperature raising rate of 100°C/min or less, thereby forming a lower alloy film of a compound of a first metal, which makes up the complex oxide, and a second metal, which makes up the lower electrode, over the lower electrode. A ceramic film in which the raw material is crystallized is formed over the lower alloy film, and an upper electrode is formed over the ceramic film.